

ABSTRACT:

Digital transmission system, transmitter and receiver for use in the transmission system, and record carrier obtained by means of the transmitter in the form of a recording device.

The transmitter (1) in a digital transmission system derives from a wideband digital signal S_{BB} having a sample frequency F_s a second digital signal appearing on its output (7), which signal comprises successive frames, each frame being made up of information packets (IP) each having a length of N bits. The number of information packets (B) in a frame is determined as follows:

If P in the formula

$$P = \frac{BR}{N} \times \frac{n_s}{F_s}$$

is an integer, where

BR is the bit rate of the second digital signal,
 n_s is the number of samples of the wide-band digital signal,

S_{BB} in which the information, after having been converted into the second digital signal, is present in one frame of the second digital signal, the number of information packets B in a frame is equal to P . If P is not an integer, B is equal to P' for a number of frames, P' being the next lower integer following P , whereas B for the other frame is equal to $P'+1$, in such a way that the average frame rate of the second digital signal is substantially equal to F_s/n_s .

A frame comprises a first frame portion (FD1), a second frame portion (FD2), and a third frame portion (FD3). The first frame portion contains synchronising information and system information. The second frame portion contains allocation information, and the third frame portion contains samples of and, if applicable, scale-factor information for the second digital signal.

(Fig. 2).